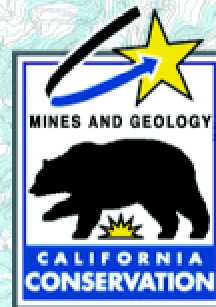


Seismic Hazard Mapping Bulletin



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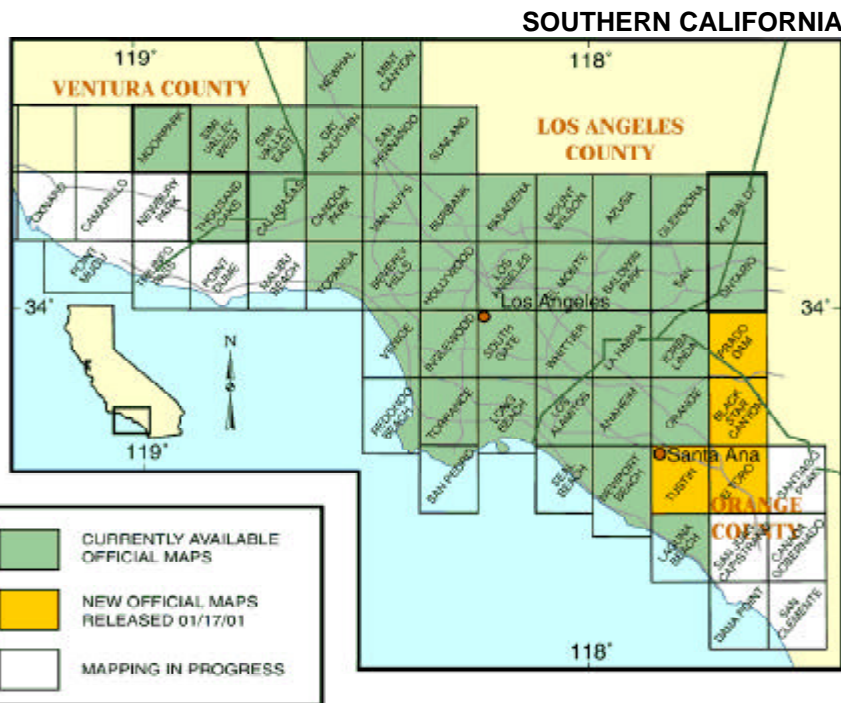
FEBRUARY 2001 BULLETIN #10

Ten New Seismic Hazard Zone Maps Released

Ten new Seismic Hazard Zone maps covering parts of Orange, Ventura, Los Angeles, Santa Clara counties and the City and County of San Francisco have been released. The November 17, 2000 release covers the Moorpark, Mt. Baldy, Ontario, Thousand Oaks 7.5-minute quadrangles and the City and County of San Francisco. These new maps affect the cities of Agoura Hills, Claremont, La Verne, Pomona, Moorpark, San Francisco, Simi Valley, Thousand Oaks and Westlake Village.

The liquefaction zones for the northern portion of San Francisco were released on April 7, 1997. The new release supercedes the 1997 map and covers the entire city and county for both liquefaction and earthquake-induced landslides. The November 17 releases are indicated in green with heavy outline on the index maps.

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Cities affected by these ten new maps.

ORANGE COUNTY		LOS ANGELES COUNTY	
City Name	Map Name	City Name	Map Name
Anaheim	Black Star Canyon, Prado Dam	Agoura Hills	Thousand Oaks
Costa Mesa	Tustin	Claremont	Mt. Baldy, Ontario
Irvine	El Toro, Tustin	La Verne	Mt. Baldy, Ontario
Laguna Hills	El Toro	Pomona	Ontario
Lake Forest	El Toro	Westlake Village	Thousand Oaks
Mission Viejo	El Toro		
Newport Beach	Tustin		
Orange	Black Star Canyon, Prado Dam		
Santa Ana	Tustin		
Tustin	Tustin		
Yorba Linda	Black Star Canyon, Prado Dam		
SANTA CLARA COUNTY		VENTURA COUNTY	
City Name	Map Name	City Name	Map Name
San Jose	San Jose East	Moorpark	Moorpark
		Simi Valley	Thousand Oaks
		Thousand Oaks	Thousand Oaks
SAN FRANCISCO CITY AND COUNTY		SAN FRANCISCO CITY AND COUNTY	
City Name	Map	City Name	Map
San Francisco	San Francisco	San Francisco	San Francisco

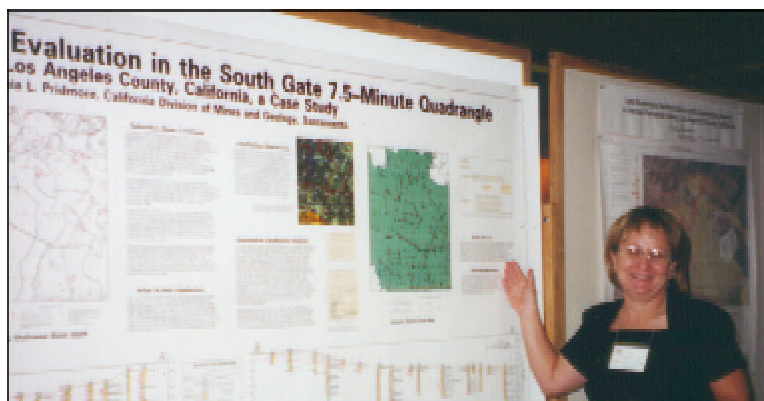
Division Takes Lead Role in International Zonation Conference

The Division of Mines and Geology provided an information booth and presented 19 papers at the **Sixth International Conference on Seismic Zonation** (6ICSZ). Thirty-one staff members attended the November 12-15, 2000 conference.

This conference, the sixth in a series that began in 1972, was attended by 350 people from 31 countries. Last held in Nice, France in 1995, it draws participants from around the world to an international forum where new seismic zonation technologies are discussed and evaluated. Researchers and policy makers meet to share the latest advances in hazard identification, mapping, mitigation, and public policy.

Charles Real, DMG's Seismic Hazards Mapping Program Manager, took a very active role as a member of the 6ICSZ's conference steering committee. He also organized the *New Mapping Technology* session, was a panelist for *New Developments in Hazard Estimation*, presented two papers, two posters, and guided DMG's support role and staff abstracts.

T. Leslie Youd was the conference chairperson. Bruce Clark led a pre-conference field trip. Earthquake Engineering Research Institute was the main sponsor of the conference



Cindy Pridmore, Associate Engineering Geologist from DMG, with her poster of *Liquefaction Hazard Evaluation in the South Gate 7.5-Minute Quadrangle, Los Angeles, California: A Case Study*.

and staff did an outstanding job accepting abstracts, registering people and organizing the conference proceedings. The hard copy and CD-ROM version of the abstracts, and the two-volume paperbound copy of the proceedings are available from EERI at:

Earthquake Engineering Research Institute
499 14th Street, Suite 320
Oakland, CA 94612-1934
(510) 451-0905
<http://www.eeri.org>

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The most recent release, January 17, 2001, covers the Black Star Canyon, El Toro, Prado Dam, the revised Tustin, and the San Jose East 7.5-minute quadrangles. These official maps affect the cities of Anaheim, Costa Mesa, Irvine, Laguna Hills, Lake Forest, Tustin, Orange, Mission Viejo, Santa Ana, Newport Beach, Yorba Linda, and San Jose.

The Tustin Quadrangle was originally released on April 15, 1998. However, in preparing the El Toro Quadrangle to the east, historical high ground water level data necessitated a modification of the seismic hazard zones. The January 17th quadrangle releases are indicated in gold on the index maps. The maps are the product of a three-dimensional analysis of geotechnical and geological data based on surface mapping and subsurface borings.

The Seismic Hazards Mapping Act (Public Resources Code – Chapter 7.8) requires the State Geologist to compile maps that identify Seismic Hazard zones within which site-specific geotechnical assessments must be completed prior to permitting most structures for human occupancy. The zones delineate areas where liquefaction and earthquake-induced landslides are most likely to occur. The goal of the Act is to improve public safety by incorporating recommended improvements resulting from the detailed site investigations into the development.

The release of these Seismic Hazard Zone Maps brings the total official maps to 51, affecting six counties and 115 cities.

EVENTS CALENDAR

March 26-31, 2001

4th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics
San Diego
www.umn.edu

April 18-20, 2001

**Seismological Society of America
2001 Annual Meeting
Commemorating the 95th Anniversary
of the 1906 San Francisco Earthquake**
San Francisco
www.seismosoc.org/meetings
msanders@usgs.gov

June 6-9, 2001

**Incorporated Research
Institutions for Seismology**
13th Annual Meeting
Jackson Hole, Wyoming
www.iris.edu

Seismic Hazard Guidelines

Special Publication 117 *Guidelines for Evaluating and Mitigating Seismic Hazards in California* is the first of three publications that present up-to-date information on seismic hazards evaluation.

This Special Publication can be purchased from:
Department of Conservation
Division of Mines and Geology
801 K Street, MS 14-33
Sacramento, CA 95814-3532
(916) 445-5716

or can be obtained from the Department web site at no cost:
<http://www.consrv.ca.gov/dmg/pubs/sp/117/index.htm>

In March 1999, the Southern California Earthquake Center published *Recommended Procedures for Implementation of DMG Special Publication 117...Liquefaction in California*:
<http://www.scec.org/outreach/products/publist4.html>.

The American Society of Civil Engineers is currently circulating a draft version of *Recommended Procedures for Implementation of DMG Special Publication 117...Landslide Hazards in California*: <http://www.pubs.asce.org/>.

Paper Maps Get a New Image

The Division of Mines and Geology is mapping new ways to make its information accessible to the public. In September 2000, 3 years of digitizing our extensive inventory of Alquist-Priolo maps paid off with the release of a CD-ROM containing the images of 235 maps for Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara and Ventura counties. The maps are widely used by local governments as well as geological consultants, real estate and construction industries. Two more CDs — with Alquist-Priolo map images for the Central Coast Region and the Northern and Eastern Regions — will be released soon.

Digitized maps and reports have some major advantages over the paper maps, including ease of storage and cost.

"Digitized maps are becoming the standard protocol, but we have more than 4,000 paper maps," said Ted Smith, Supervising Geologist of the Division's Technical Information and Support Program.

"If someone wanted to buy the 235 Alquist-Priolo maps for southern California on paper, they would cost \$590. In this format, all of those maps are available for \$30, and users can print out whatever portion they need," Smith explained. "Plus, some of the companies and individuals that want these maps are reviewing hundreds of sites. With the CD, they can move from county to county and map to map with a click of the mouse."

Wiegers Chairs One-Day Symposium at the 43rd AEG Annual Meeting

A full day symposium was devoted to the Seismic Hazards Mapping Act and its impact on California planning at the **43rd Annual Meeting of the Association of Engineering Geologists**, held in San Jose September 18-21, 2000.

Mark Wiegers (DMG's San Francisco District Office) chaired the symposium. The morning session featured eight speakers from the state and federal government describing the newest geologic information, development of shaking hazard maps and the current methodologies used in hazard analysis. The afternoon session featured speakers from local agencies, consulting firms and realty associations that discussed some of the regulatory issues facing cities and counties when implementing the Act.



"These Alquist-Priolo CDs are an interim product — images only," Smith said. "We're on our way to producing CDs that have both images and GIS files. Those should be available in a few months. But right now we have a digital product that will help a lot of people who don't need GIS data but do need the maps."

Outreach Unit Gears Up for Expanded Public Outreach Support

The Seismic Hazards Mapping Program Outreach Unit welcomes Senior Engineering Geologist Jack McMillan as the Local Government Outreach Coordinator. Jack has been mapping landslide hazard zones since 1994. He has helped the outreach effort for the past 3 years, distributing 43 official zone maps and visiting jurisdictions to discuss responsibilities and requirements under the law.



"Our plan is to expand this outreach unit to four people. Once fully staffed, it will allow us to provide increased support to our map users and ensure that the seismic hazard maps are being used properly by local planners, building officials and homeowners," McMillan says.



Associate Planner Candace M. Hill joined the Outreach Unit in May 2000. Candace came to the Department of Conservation from the Sacramento County Planning Department. She will be responsible for implementation and compliance issues with lead agencies and coordinate our information and outreach

booths at professional conferences.

Ross Martin, Research Analyst, transferred from DMG's Technical Information and Support Program. Ross has an extensive graphics design background that will enhance our newsletters, map products and web page material.



The fourth staff position depends on funding. The Associate Engineering Geologist position will be responsible for reviewing the site investigations triggered by the landslide and liquefaction zones and determine if the construction practices have led to safer construction.

In the past 6 months the outreach staff has provided information at the California Chapter of the American Planning Association, Association of Engineering Geologists, and the 6th International Seismic Zonation conferences.

We have also met with local agencies, delivering ten Preliminary Zone maps to the cities and counties affected by the recently released maps prepared in northern and southern California.

In addition, we have participated in two public workshops with the City and County of San Francisco, held press conferences in Los Angeles and San Francisco, and coordinated with the City of San Jose on upcoming map releases.

The focus of this Unit over the next 2 years will be to work more closely with lead agencies to ensure that the seismic hazard maps are used in the development process. The resulting changes in construction can help reduce structural damage and loss of human life during future earthquakes.

CONTACT INFORMATION

This Bulletin is produced by the California Department of Conservation's Division of Mines and Geology to provide information about the Seismic Hazards Mapping Program and is printed as new maps are released.

The Department of Conservation posts information to the web pertaining to the **Seismic Hazards Mapping Act** and the **Alquist-Priolo Earthquake Fault Zoning Programs** at :
<http://www.consrv.ca.gov/dmg>

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For information about the Alquist-Priolo Earthquake Fault Zoning Act contact:

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REMINDER: FILING OF SITE INVESTIGATION REPORTS

Cities, Counties, and State Agencies where official seismic hazard zone maps have been released are required to send a copy of any required site investigation report to the State Geologist within 30 days of approval.

The purpose of this submittal is to expedite future updates of the zone maps by DMG. The Department of Conservation has no review authority, and does not approve or disapprove the reports.

Send reports to:

Department of Conservation
Division of Mines and Geology
Seismic Hazards Mapping Program - Reports
801 K Street, MS 12-31
Sacramento, CA 95814